NOTES ON DRAGONFLIES OF THE GENUS NEUROCORDULIA

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In the Bulletin of the Wisconsin Natural History Society, Vol. VIII, p. 174, October, 1910, R. A. Muttkowski described "*Neurocordulia obsoleta clara* n. subsp.," from "one female labelled Alabama in the Brooklyn Institute." He adds: "The entire absence of anal spots on all wings will distinguish this species from other *Neurocordulia*. There is not the slightest trace of the anal spots as found in *N. obsoleta* and *yamaskanensis*."

In describing *Neurocordulia virginiensis*, Bulletin Brooklyn Entomological Society, Vol. XXII, pp. 155–157, June, 1927, the writer did not refer to the description of *clara* which appeared subsequent to the catalogue of May, 1910. By some it is considered to be synonymous with *obsoleta* Say. We are now able to present a figure, natural size, of the type of *clara*, also reproducing that of *virginiensis* and one of *obsoleta*, for comparison. The wings of *N. yamaskanensis* Provancher, are figured in Entomological News, November, 1908, plate 18, and there is a description by Dr. Hagen in "Psyche," July, 1890, pp. 367, 371. It would appear that there may be four species of *Neurocordulia* in eastern North America.

While *virginiensis* resembles *clara* in having less reticulated wings than *obsoleta*, the vein at the lower margin of all four pterostigmata is more thickened, curved and black than in either *clara* or *obsoleta*, which also have the pterostigmata longer. Attention may also be called to the small number of postnodals in *virginiensis*, seven in the left fore wings and six in the right wing. In *obsoleta* and *clara* there are usually nine. In *obsoleta*, *yamaskanensis* and *clara*, there are in part three rows of cells in the front wing between Cu2 and the hind margin, while in *virginiensis* there are but two. In the hind wing there are three

rows of cells between A2 and the hind margin of the wing in *obsoleta, clara* and *yamaskanensis,* while in *virginiensis* there are but two. The female appendages are as long, or very nearly as long, as segments nine plus ten in *clara,* as stated in the original description, while in *obsoleta* and *virginiensis* they are considerably shorter. The tarsi are fuscous in *obsoleta* and *virginiensis,* while in *clara* they are pale and of the same color as the femora and tibiae.

Two other names appear under *Neurocordulia,* namely *polysticta* Burmeister, stated by Dr. Hagen in "Psyche," 1890, to be a synonym of *obsoleta,* and *molesta* Walsh described in the Proceedings of the Entomological Society of Philadelphia, 1863, p. 254. Dr. Hagen also placed this as a synonym of *obsoleta,* and as Walsh states that all four wings are marked alike and that there is "a square spot upon each of the second series of antecubitals" in the front wing "and a large irregular spot upon the nodus, all pale reddish-brown," it is certain that neither *clara* or *virginiensis* are included.

EXPLANATION OF PLATE VIII

FIGURE 1. *Neurocordulia obsoleta* Say, Cabin John, Md., June, 1910.
FIGURE 2. *Neurocordulia clara* Muttkowski, Type Alabama.
FIGURE 3. *Neurocordulia virginiensis* Davis, Type, Buckingham Co., Va.